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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,756	02/11/2002	Naoshi Yamada	14998.285	4497

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EXAMINER

NGUYEN, BINH QUOC

ART UNIT PAPER NUMBER

2664

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/073,756

Applicant(s)

YAMADA ET AL.

Examiner

Binh Q. Nguyen

Art Unit

2664

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/11/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/12/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by *Shirai et al* the US Patent No: (US 5,905,585), hereinafter referred to as *Shirai*.

Regarding claim 1; *Shirai* teaches a media converter provided with an integrated local information transmission function for performing conversions between signals of an electrical network and signals of an optical network comprising:

a first transmission-reception processing section which performs conversions between the electrical network signals and transmission-reception data in accordance with the transmission format of the electrical network (*see Fig. 2, col. 6, lines 6-21, item "6a" means a first transmission-reception processing section*);

a second transmission-reception processing section which performs conversions between the optical network signals and transmission-reception data in accordance with the transmission format of the optical network (*see Fig. 2, col. 6, lines 6-21, item "11a" means a second transmission-reception processing section*); and

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a media independent interface section (*see Fig. 2, col. 5, lines 1-67, item "1a" means a media independent interface section*) which connects the first transmission-reception processing section with the second transmission-reception processing section and performs data interfacing and also generates error signals in a predetermined plurality of frequencies outside frequency bands used for data communication or detects an error signal in a frequency outside the communication frequency bands (*see Fig. 2, col. 2, line 50-to-col. 3, line 18; inherently, detecting errors on Shirai's patent mean detects an error signal in a frequency outside the communication frequency bands*), wherein

the transmission and reception of local information is performed with media converters that are matched via the optical network (*see Fig. 2, col. 6, lines 6-39, and col. 4, lines 5-26*).

Regarding claims 2, and 6: *Shirai* teaches a media converter provided with an integrated local information transmission function comprising:

a first transmission-reception processing section which has a transmission section for performing code conversion and encoding on input data and then transmitting resultant data to a 100 BASE-TX local area network and a reception section for performing decoding and code conversion on signals received from the 100 BASE-TX local area network (*see Fig. 2, col. 6, lines 6-21, and col. 7, line 45-to-col. 8, line 54, item "6a" means a first transmission-reception processing section*);

a second transmission-reception processing section which has a transmission section for performing code conversion and encoding on input data and then transmitting resultant data to a 100 BASE-FX local area network and a reception section for performing decoding and code conversion on signals received via the 100 BASE-FX local area network (*see Fig. 2, col. 6, lines 6-21, and col. 7, line 45-to-col. 8, line 54, item "11a" means a second transmission-reception processing section*);

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a media independent interface section which connects the first transmission-reception processing section together with the second transmission-reception processing section and performs data interfacing and error signal transmission (*see Fig. 2, col. 5, lines 1-67, item "1a" means a media independent interface section*);

an electrical-optical conversion section which modulates optical signals and sends optical signals to the 100 BASE-FX local area network using signals output from the transmission section of the second transmission-reception processing section (*see Fig. 2, col. 6, lines 6-21, item "8a" means an electrical-optical conversion section*);

an optical electrical-conversion section which demodulates optical signals received from the 100 BASE-FX local area network and supplies generated data to the reception section of the second transmission-reception processing section (*see Fig. 2, col. 6, lines 6-21, item "9a" means an optical electrical-conversion section*); and

a control section which controls the media independent interface section (*see Fig. 2, col. 5, lines 1-67, item "1a" also means a control section*), wherein

the media independent interface section (*see Fig. 2, col. 6, lines 1-67, item "1a" means a media independent interface section*) transmits signals in a predetermined plurality of frequencies outside frequency bands used for data signal communication or detects signals in a frequency outside the communication frequency bands based on an instruction from the control section, and performs the transmission and reception of local information with media converters that are matched via the 100 BASE-FX local area network (*see Fig. 2, col. 2, line 50-to-col. 3, line 18, inherently, detecting errors on Shirai's patent mean detects signals in a frequency outside the communication frequency bands*).

Regarding claim 3: *Shirai* teaches the media converter provided with an integrated local information transmission function according to claim 2, wherein the control section gives instructions to the media independent interface section for signals to be transmitted in one frequency or in a plurality of frequencies based on input local information (*see Fig. 2, col. 5, line 1-to-col. 7, line 44*).

Regarding claim 4: *Shirai* teaches the media converter provided with an integrated local information transmission function according to claim 2, wherein local information transmitted by the media independent interface section using frequencies outside the communication frequency bands includes control signals, status information, and fault information that includes at least one of twist pair cable abnormalities and power supply abnormalities (*see Fig. 2, col. 5, line 1-to-col. 7, line 44*).

Regarding claim 5: *Shirai* teaches a media converter provided with an integrated local information transmission function for performing conversions between signals of an electrical network and signals of an optical network comprising:

a first transmission-reception processing section which performs conversions between the electrical network signals and transmission-reception data in accordance with the transmission format of the electrical network (*see Fig. 2, col. 6, lines 6-21, item "6a" means a first transmission-reception processing section*);

a second transmission-reception processing section which performs conversions between the optical network signals and transmission-reception data in accordance with the transmission format of the optical network (*see Fig. 2, col. 6, lines 6-21, item "11a" means a second transmission-reception processing section*);

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a media independent interface section (*see Fig. 2, col. 5, lines 1-67, item "1a" means a media independent interface section*) which connects the first transmission-reception section processing with the second transmission-reception processing section and performs data interfacing and also generates error signals (*see Fig. 2, col. 2, line 50-to-col. 3, line 18; inherently, before detecting errors on Shirai's patent, it generates error signals*); and

a control section which controls transmission timings of transmission error signals and idle signals transmitted from the media independent interface section and causes these signals to be transmitted in combinations (*see Fig. 2, col. 5, lines 1-67, item "1a" also means a control section*), wherein the transmission and reception of local information is performed with media converters that are matched via the optical network (*see Fig. 2, col. 6, lines 6-39, and col. 4, lines 5-26*).

Regarding claim 7: *Shirai* teaches the media converter provided with an integrated local information transmission function according to claim 6, wherein the local information transmitted by the media independent interface section includes fault information, status information, and control signals (*see Fig. 2, col. 2, line 50-to-col. 3, line 18*).

Regarding claim 8: *Shirai* teaches a media converter provided with an integrated local information transmission function, wherein, on the transmitting side, VALID symbols and INVALID symbols are transmitted alternately and, on the reception side, a normal data reception state and an error reception state are alternately generated and the transmission of local information is performed based on the changes in the states (*see Fig. 2, col. 2, line 50-to-col. 4, line 35*).

Allowable Subject Matter

3. **Claim 9** is allowable. The following is a statement of reasons for the indication of allowable subject matter: the prior art made of record fails to teach in combination of other limitations recited claim 9;

a power cut detection section which detects a reduction in a voltage of a power supply supplied to the media converter and outputs a power supply abnormality signal;

a control section which outputs a control signal based on the power supply abnormality signal input from the power cut detection section;

a layer 1 signal generating section which receives the control signal from the control section and generates a layer 1 signal; and

a multiplexing section which multiplexes encoded transmission data with the layer 1 signal output from the layer 1 signal generating section, and in which

a second media converter installed at station premises comprises:

a layer 1 signal detection section installed so as to match the first media converter via a 100 BASE-FX local area network which detects layer 1 signals from received data signals, wherein

when a drop in the power supply voltage is detected by the power cut detection section, the first media converter halts normal data transmission and outputs a power cut notification signal from the layer 1 signal generating section, and

the second media converter detects the power cut notification signal from the received data signals in the layer 1 signal detection section and outputs a fault alarm signal.


Contact Information


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh Q. Nguyen whose telephone number is 571-272-8563. The examiner can normally be reached on M-F: 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,


By: _____
Binh Q. Nguyen
Patent Examiner
10/27/2005


WELLINGTON CHIN
SENIOR PATENT EXAMINER